

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	929	(210/634).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/04/07 15:07
L2	338	(540/456).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/04/07 15:07
L3	0	1 and 2	US-PGPUB; USPAT	OR	ON	2005/04/07 15:07
L4	2	1 and (rapam\$ OR ascom\$ OR FK506)	US-PGPUB; USPAT	OR	ON	2005/04/07 15:10
L5	427	(422/256).CCLS.	US-PGPUB; USPAT	OR	OFF	2005/04/07 15:10
L6	0	5 and 2	US-PGPUB; USPAT	OR	ON	2005/04/07 15:11
L7	10	2 AND ("extraction column" "countercurrent" "counter current")	US-PGPUB; USPAT	OR	ON	2005/04/07 15:22
L8	1	("4894366").PN.	US-PGPUB; USPAT	OR	OFF	2005/04/07 15:23



Enter a Chemical Name, CAS Number, Molecular Formula or Weight.

Use * for partial names (e.g. ben*).

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Rapamycin [53123-88-9]

Synonyms: Antibiotic AY 22989; AY 22989; Rapamycin; RAPA, Rapamune; Sirolimus;

	Tools	OpenChem
	<input type="button" value="BUY AT CHEMACX.COM"/>	<input type="button" value="VIEW LINKS"/>
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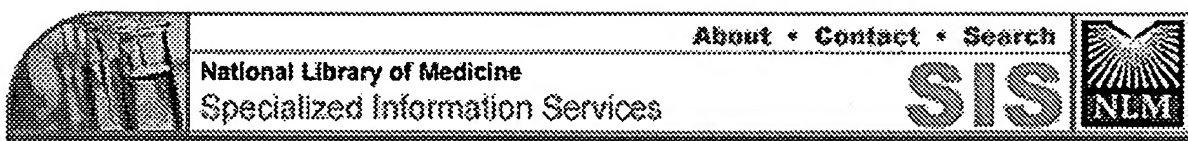
 $C_{51}H_{79}NO_{13}$ 914.184 53123-88-9 X1000584-2 Schreiber, S.L. et al.
J. Org Chem. 1992,
57, 5058-60

More information about the chemical is available in these categories:

Health (1)

[UMCP Partial list of mutagens](#)

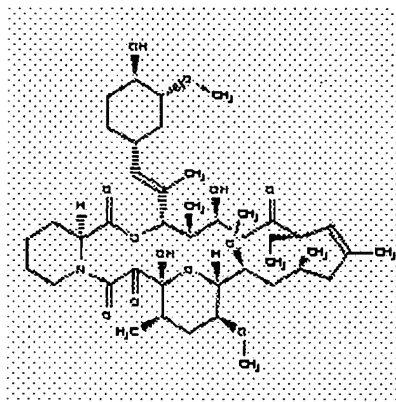
Medications (2)



ChemIDplus Lite Record

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Ascomycin RN: 11011-38-4



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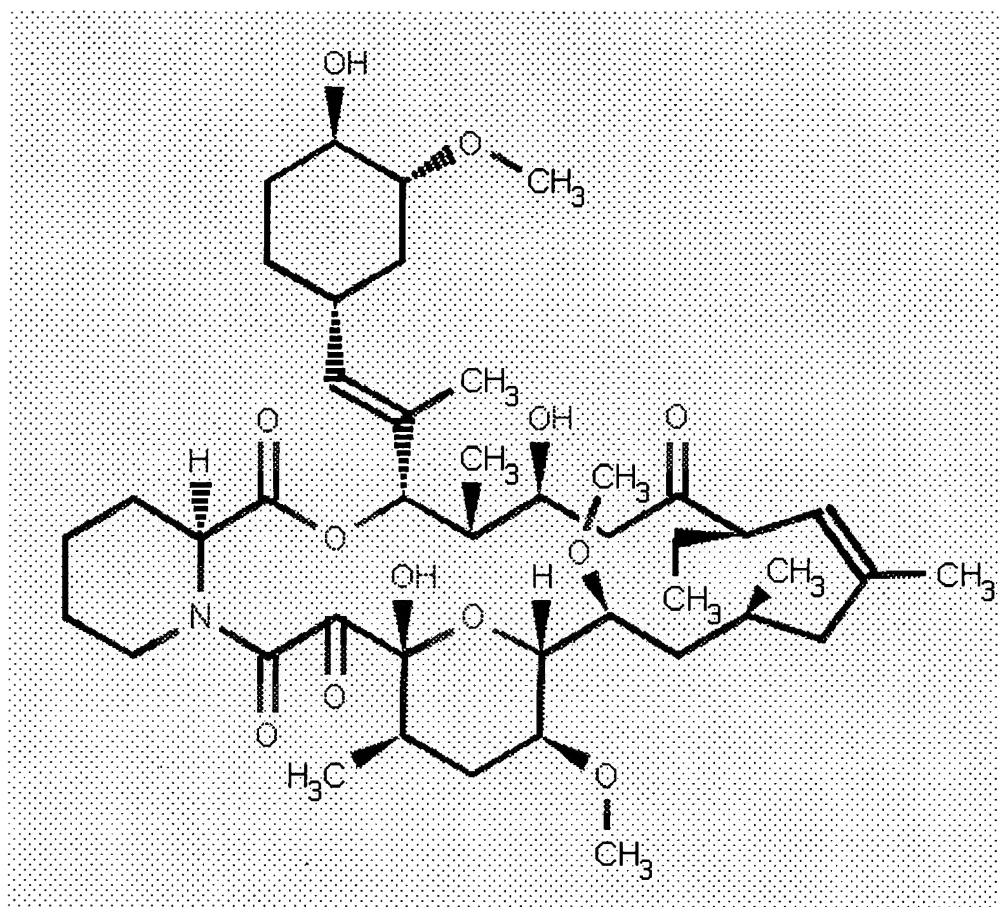
Synonyms

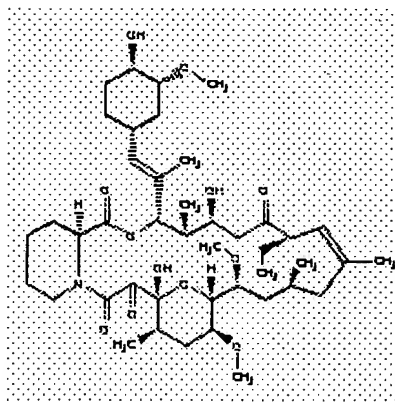
i NSC-106410

Systematic Name

i Ascomycin

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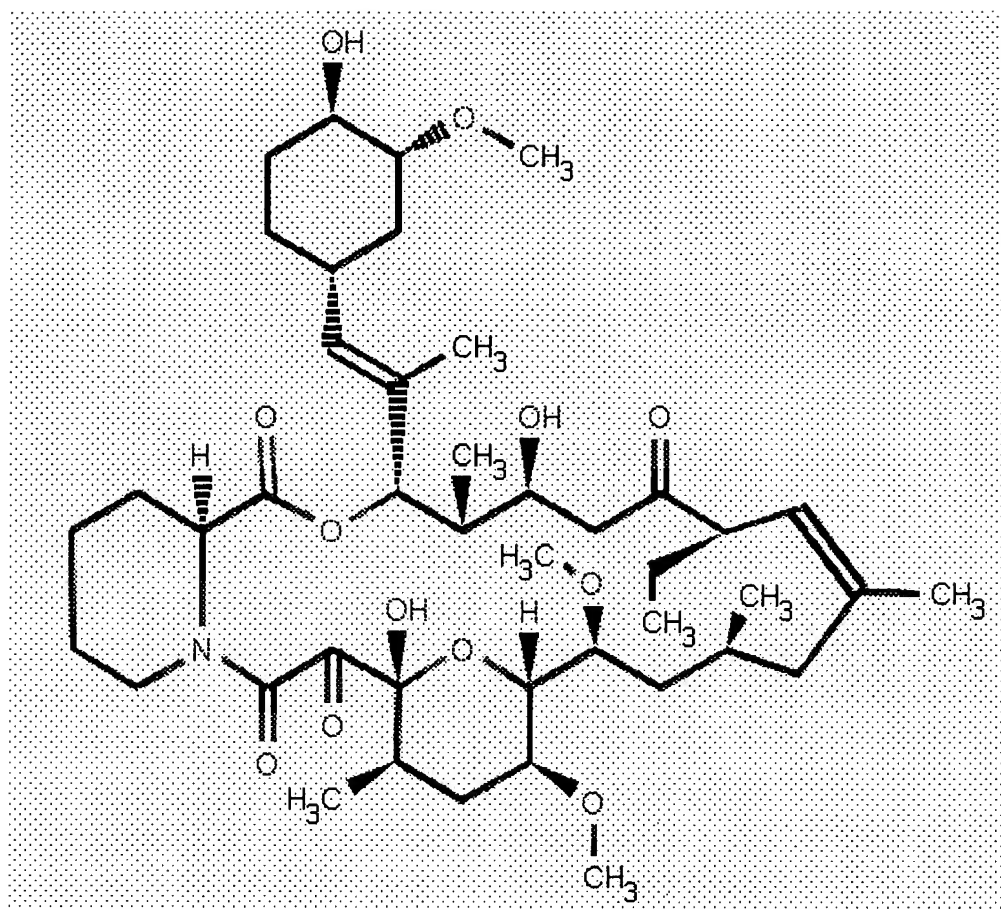


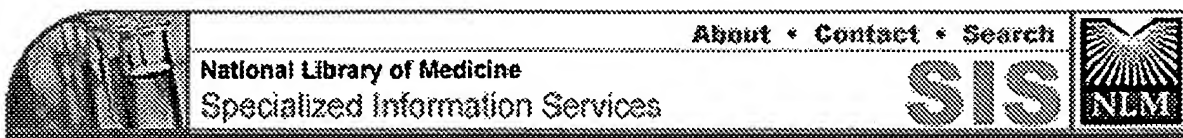
**ChemIDplus Lite
Record**[Tox. & Env. Health](#) [TOXNET](#) [Return to Results Page](#)**FR 900520
RN: 104987-12-4**

540/456

[Enlarge Image](#)**Molecular Formula** **C43-H69-N-O12**

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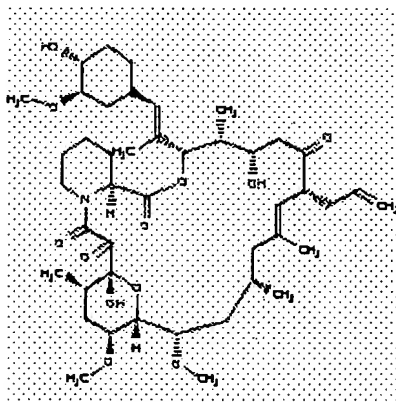




ChemIDplus Lite Record

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Tacrolimus [USAN:BAN:INN] RN: 104987-11-3

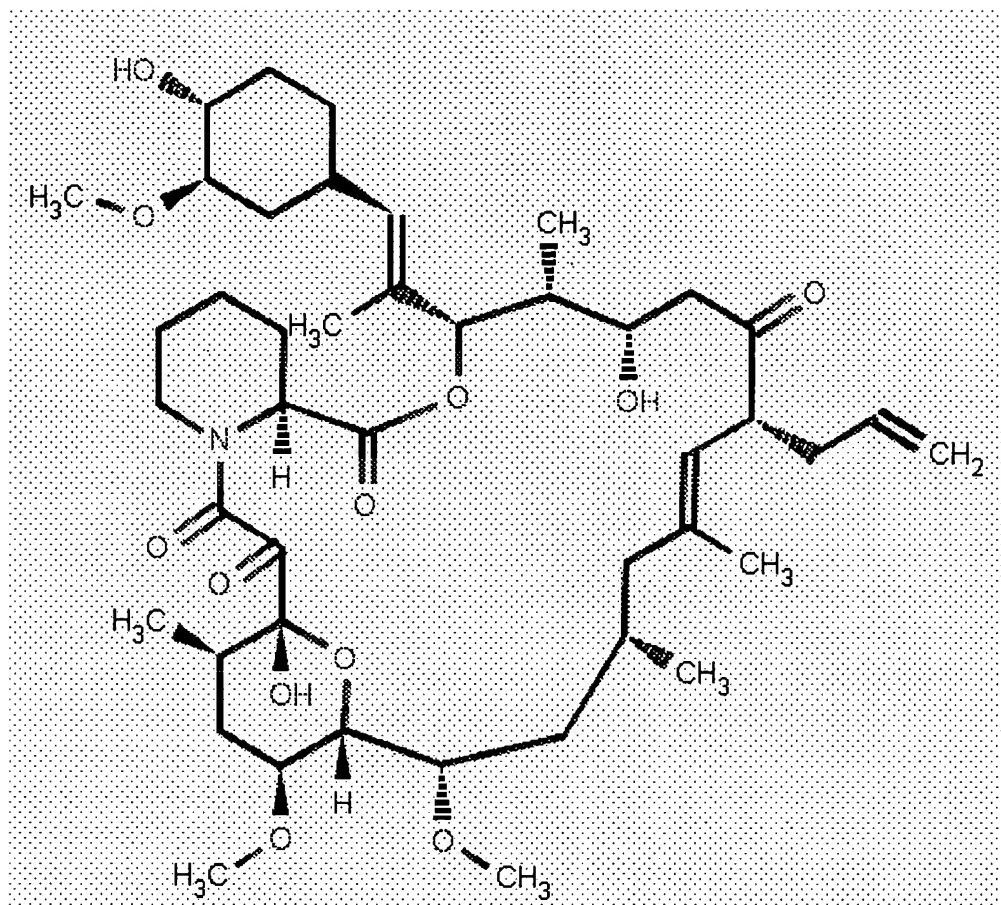


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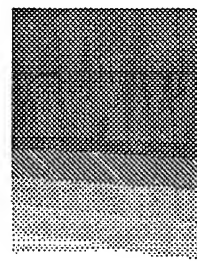
Molecular Formula

i C₄₄-H₆₉-N-O₁₂

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Tacrolimus (FK506)

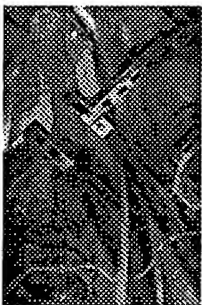

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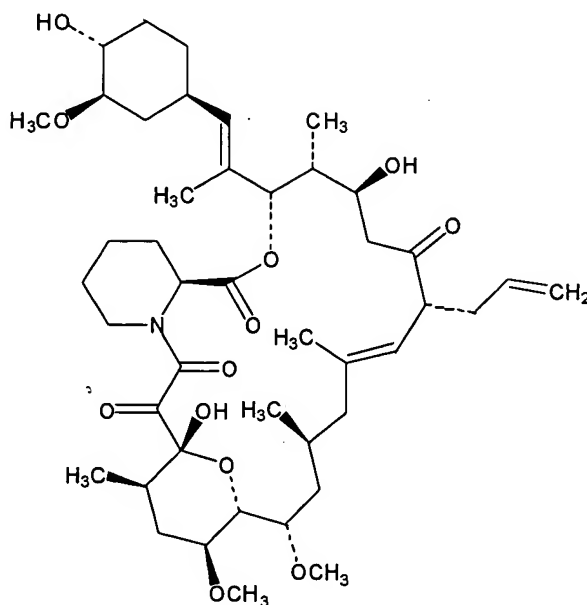
Immunosuppressive agents

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[Tacrolimus](#)

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Monograph number: 09117**Title:** Tacrolimus**CAS Registry Number:** 104987-11-3**CAS Name:** (3*S*,4*R*,5*S*,8*R*,9*E*,12*S*,14*S*,15*R*,16*S*,18*R*,19*R*,26*aS*)-5,6,8,11,12,13,14,15,16,17,18,19,24,25,26,26*a*-Hexadecahydro-5,19-dihydroxy-3-[(1*E*)-2-[(1*R*,3*R*,4*R*)-4-hydroxy-3-methoxycyclohexyl]-1-methylethenyl]-14,16-dimethoxy-4,10,12,18-tetramethyl-8-(2-propenyl)-15,19-epoxy-3*H*-pyrido[2,1-*c*][1,4]oxaazacyclotricosine-1,7,20,21(4*H*,23*H*)-tetrone**Additional Names:** 17-allyl-1,14-dihydroxy-12-[2-(4-hydroxy-3-methoxycyclohexyl)-1-methylvinyl]-23,25-dimethoxy-13,19,21,27-tetramethyl-11,28-dioxa-4-azatricyclo[22.3.1.0^{4,9}]octacos-18-ene-2,3,10,16-tetraone**Molecular Formula:** C₄₄H₆₉NO₁₂**Molecular Weight:** 804.02**Percent Composition:** C 65.73%, H 8.65%, N 1.74%, O 23.88%

Literature References: Macrolide isolated from *Streptomyces tsukubaensis* no. 9993: M. Okuhara *et al.*, EP 184162 (1986 to Fujisawa); and characterization: T. Kino *et al.*, *J. Antibiot.* **40**, 1249 (1987). Structure determ: H. Tanaka *et al.*, *J. Am. Chem. Soc.* **109**, 5031 (1987). Total synthesis of (-)-form: T. K. Jones *et al.*, *J. Am. Chem. Soc.* **111**, 1157 (1989). *In vitro* immunosuppressant activity in comparison with cyclosporin, *q.v.*: T. Kino *et al.*, *J. Antibiot.* **40**, 1256 (1987). Toxicology: K. Ohara *et al.*, *Transplant. Proc.* **22**, 83 (1990). Symposium on pharmacology and clinical trials: *ibid.* **23**, 2709-3376 (1991). Review of mechanism of action: G. Wiederrecht *et al.*, *Ann. N.Y. Acad. Sci.* **696**, 9-19 (1993); of clinical trials in comparison with cyclosporin in renal transplantation: G. A. Knoll, R. C. Bell, *Br. Med. J.* **318**, 1104-1107 (1999). Review of use in dermatoses: A. K. Gupta *et al.*, *J. Eur. Acad. Dermatol. Venereol.* **16**, 100-114 (2002).

**Derivative Type:** Monohydrate**CAS Registry Number:** 109581-93-3**Manufacturers' Codes:** FK-506 ; FR-900506**Trademarks:** Prograf (Fujisawa) ; Protopic (Fujisawa)**Molecular Formula:** C₄₄H₆₉NO₁₂·H₂O**Molecular Weight:** 822.03

Percent Composition: C 64.29%, H 8.71%, N 1.70%, O 25.30%

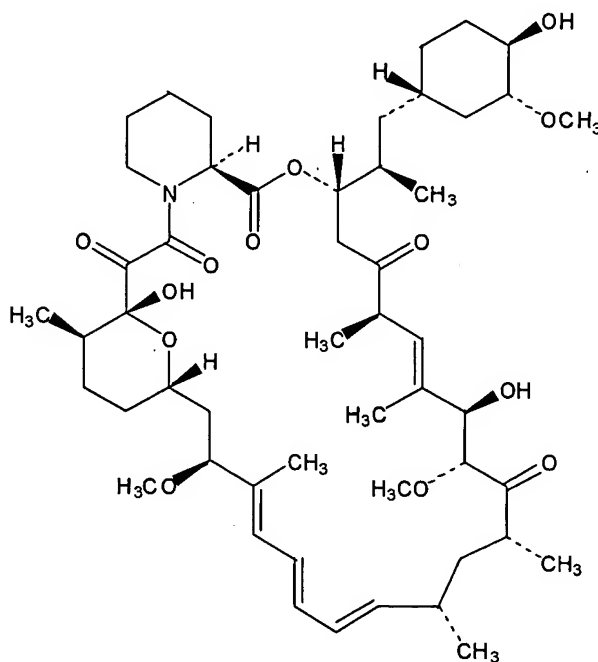
Properties: Colorless prisms from acetonitrile, mp 127-129°. $[\alpha]_D^{23}$ -84.4° (c = 1.02 in chloroform). Sol in methanol, ethanol, acetone, ethyl acetate, chloroform, diethyl ether; sparingly sol in hexane, petroleum ether. Insol in water. LD₅₀ i.p. in mice: >200 mg/kg (Kino). LD₅₀ in male, female rats (mg/kg): 57.0, 23.6 i.v.; 134, 194 orally (Ohara).

Therapeutic Category: Immunosuppressant.

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Monograph number: 08202**Title:** Rapamycin**CAS Registry Number:** 53123-88-9**Additional Names:** Sirolimus ; RAPA; RPM**Manufacturers' Codes:** AY-22989 ; NSC-226080**Trademarks:** Rapamune (Wyeth)**Molecular Formula:** C₅₁H₇₉NO₁₃**Molecular Weight:** 914.17**Percent Composition:** C 67.01%, H 8.71%, N 1.53%, O 22.75%

Literature References: Triene macrolide antibiotic isolated from *Streptomyces hygroscopicus*. Name derived from the native word for Easter Island, Rapa Nui. Isoln: S. N. Sehgal *et al.*, **DE** 2347682; *eidem*, US 3929992 (1974, 1975 both to Ayerst McKenna Harrison); purification and characterization: C. Vézina *et al.*, *J. Antibiot.* **28**, 721 (1975); S. N. Sehgal *et al.*, *ibid.* 727. Inhibition of immune response: R. R. Martel *et al.*, *Can. J. Physiol. Pharmacol.* **55**, 48 (1977); of graft rejection in mice: C. P. Eng *et al.*, *Transplant. Proc.* **23**, 868 (1991). Total synthesis: K. C. Nicolaou *et al.*, *J. Am. Chem. Soc.* **115**, 4419 (1993); D. Romo *et al.*, *ibid.* 7906. Series of articles on therapeutic monitoring and pharmacokinetics: *Clin. Ther.* **22**, Suppl. 2, B1-B132 (2000); on pharmacology and clinical experience in transplantation: *Transplant. Proc.* **35**, Suppl. 1, S1-S233 (2003). Clinical trial in prevention of coronary restenosis: D. R. Holmes, Jr. *et al.*, *Circulation* **109**, 634 (2004).



Properties: Colorless crystalline solid from ether, mp 183-185°. uv max (95% ethanol): 267, 277, 288 nm ($E_{1\%}^{1\text{cm}}$ 417, 541, 416). $[\alpha]_D^{25}$ -58.2° (methanol). Sol in ether, chloroform, acetone, methanol and DMF; very sparingly sol in hexane and petr ether. Substantially insol in water. LD₅₀ in mice (mg/kg): 600 i.p.; >2,500 orally (Vézina).

Use: Tool for immunochemistry.

Therapeutic Category: Immunosuppressant; antirestenotic.

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